Comment: MORI SEIKI CNC LATHE LARGE

1-Fill tube with sand & install plugs DT8534 on both ends as per Folio FA166

2-Turn first side as per Folio FA166

3-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D412-664-243.

QC1

INSPECT ALL DIM TO DIM SHEET





J.F. 07/10/11

Comment: INSPECT ALL DIM TO DIM SHEET

4.0

Monday, 7/16/2007 2:41:38 PM Date: Kim Johnston User: **Process Sheet** Drawing Name: HIGH AFT X-TUBE 412 Customer: CU-DAR001 Dart Helicopters Services Part Number: D412664203 Job Number: 33538 Job Number: Description: Seq. #: Machine Or Operation: MORI SEIKI CNC LATHE LARGE MORI SEIKI 5.0 Comment: MORI SEIKI CNC LATHE LARGE 1-Turn second side as per Folio FA166 2-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D412-664-243. J.F. 07/10/11 3- Remove sand and plugs 4-Scribe part # and batch # using vibrating stylus as per Dwg D412-664-243 Inside of Cuff(Donot engrave on outside of tube) INSPECT ALL DIM TO DIM SHEET 6.0 QC1 Comment: INSPECT ALL DIM TO DIM SHEET 7.0 QC8 SECOND CHECK Comment: SECOND CHECK 8.0 Comment: LANDING GEAR RESOURCE 1 7-10-11 1-Polish entire outside surface of crosstube 9.0 QC5 Comment: INSPECT WORK TO CURRENT STEP 10.0 Comment: HAND FINISHING RESOURCE #1 Chemical Conversion Coat as per QSI 005 4.1 INSPECT POWDER COAT/CHEMICAL CONVERSION 11.0 QC3 Comment: Inspect work & Chemical conversion Coat

7 -

Monday, 7/16/2007 2:41:38 PM Date: Kim Johnston User: **Process Sheet** Drawing Name: HIGH AFT X-TUBE 412 Customer: CU-DAR001 Dart Helicopters Services Part Number: D412664203 Job Number: 33538 Job Number: Description: Seq. #: Machine Or Operation: BENDING MACHINE 12.0 BENDING Comment: BENDING MACHINE Bend tube as per Dwg D412-664-243 using CNC bender program 412-af and Folio FT010 7-10-12 DIMENSIONAL CHECK OF X-TUBES 13.0 CHECK OF X-TUBES LANDING GEAR RESOURCE 1 LANDING GEAR 1 14.0 Comment: LANDING GEAR RESOURCE 1 1-Drill pilot holes in tube as per Dwg D412-664-243 using drill Jig DT8550 & DT8551 2-Ream hole to finish size in tube as per Dwg D412-664-243using drill Jig DT8550 & DT8551.Chec dimensions between holes, both sides on both cuffs, to ensure alignment with saddle holes. 3-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D412-664-243 HAND FINISHING RESOURCE #1 15.0 HAND FINISHING Comment: HAND FINISHING RESOURCE #1 Chemical Conversion Coat as per QSI 005 4.1 INSPECT POWDER COAT/CHEMICAL CONVERSION 16.0 QC3 POWDER COAT/CHEMICAL CONVERSION Comment: INSPECT INSPECT WORK TO CURRENT STEP 17.0 QC5 Comment: INSPECT WORK TO CURRENT STEP OUTSIDE SERVICES -LG 18.0 INLTRA SONIC Comment: Sub-Contracting OUTSIDE SERVICES Liquid Penetrant Inspection as per QSI 0380 Issue P/O: LPI as per ASTM 1417 CL07/10/19 ( Level 2 Attach copy of NDT results to work order

Monday, 7/16/2007 2:41:38 PM Date: Kim Johnston User: **Process Sheet** Drawing Name: HIGH AFT X-TUBE 412 Customer: CU-DAR001 Dart Helicopters Services Part Number: D412664203 Job Number: 33538 Job Number: Description: Seq. #: Machine Or Operation: PACKAGING RESOURCE #1 PACKAGING 1 19.0 Comment: PACKAGING RESOURCE #1 Inspect for transit damage Ensure copy of NDT results attached to work order. INSPECT WORK TO CURRENT STEP 20.0 QC5 Comment: Inspect for damage & ensure results are as per Dwg D412-664-203 SPRAY PAINTING 21.0 Comment: SPRAY PAINTING 1-Prime inside and outside crosstube as per QSI 005 4.2 2-Paint outside crosstube with White Imron as per QSI 005 4.2 INSPECT SPRAY PAINT 22.0 QC14 Comment: Inspect Spray Paint Wrap in plastic bag to protect from scratches 23.0 Rubber Cushion (per sq ft) Comment: Qtv.: 0.0492 sf(s)/Unit Total:  $0.0492 \, sf(s)$ Rubber Cushion (per sq ft) .630" x5.70" x2pcs Batch: 24.0 D2856600 Abrasion Strip Comment: Qtv.: Total: 1.7640 f(s) 1.7640 f(s)/Unit Pick: Description Qty Part number 2 D2856-600(Cut to 10.090") Abrasion Strip 25.0 D28961 Support Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s) Pick: Qty Part number **Description Batch** 30 200 1 D2896-1 Support

Monday, 7/16/2007 2:41:38 PM Date: Kim Johnston User: **Process Sheet** Drawing Name: HIGH AFT X-TUBE 412 Customer: CU-DAR001 Dart Helicopters Services Part Number: D412664203 Job Number: 33538 Job Number: Description: Seq. #: **Machine Or Operation:** Chafing Shield 26.0. D31891 Comment: Qty.: 2.0000 Each(s) 2.0000 Each(s)/Unit Pick: **Description Batch** Qty Part number 67-10-26 25 **Chafing Sheild** 2 D3189-1 MS2192028 Clamp(per MIL-DTL-8783C) 27.0 4.0000 Each(s)/Unit Total: 4.0000 Each(s) Comment: Qty.: Pick: Qty Part number Description Batch Clamp 104 423 4 MS21920-28 07-10-26 clamp(per MIL-DTL-8783C) MS2192030 28.0 Comment: Qty.: Total: 2.0000 Each(s)/Unit 2.0000 Each(s) clamp(per MIL-DTL-8783C) 07-10-26 batch: 100154 LANDING GEAR 1 LANDING GEAR RESOURCE 1 29.0 Comment: LANDING GEAR RESOURCE 1 Assemble as per Dwg D412-664-203 1-Install supports with magnobond as per QSI 015 Adhere for for 12 Hrs A/R 6398 Magnobond Batch: 104677 Expiry Date: 08-10-01 RT 07-1025 2-Install clamps as per Dwg D212-664-141. Torque clamps to 80-100 in lb. INSPECT WORK TO CURRENT STEP 30.0 QC5 Comment: INSPECT WORK TO CURRENT STEP PACKAGING RESOURCE #1 PACKAGING 1 31.0 Comment: PACKAGING RESOURCE #1 Pick Packing Kit

| •        | Monday, 7/16/20<br>Kim Johnston | )07 2:41:38 PM                           |              | Process S           | Sheet              |                                |        |
|----------|---------------------------------|--|--------------|---------------------|--------------------|--------------------------------|--------|
| . Custom | ier: CU-DAR00                   | 1 Dart Helicopters Serv                  | ices         |                     | wing Name: HIGH    | AFT X-TUBE 412                 |        |
| , .      | 22520                           |  |              |                     | 4 A.L              | 004000                         |        |
| Job Numb | oer: 33538                      |  |              | P                   | art Number: D4126  | 664203                         |        |
|          |                                 |  |              |                     |                    |                                |        |
| Seq. #:  | Machine C                       | Or Operation:                            |              |                     | Descriptio         | on:                            |        |
| 32.0     | AN640A                          |  |              | Bolt                |                    |                                |        |
|          |                                 |  |              |                     |                    |                                |        |
| Com      | nment: Qty.:<br>Bolt            | 4.0000 Each(s)/Unit                      | Total:       | 4.0000 Each(s)      | 1                  | 9                              |        |
|          | Batch:_                         | M104517                                  |              |                     | )                  | ×′                             |        |
| 33.0     | AN641A                          |  |              | Bolt                |                    |                                |        |
|          |                                 |  | 5-30         |                     |                    |                                |        |
| Com      | nment: Qty.:                    | 2.0000 Each(s)/Unit                      | Total:       | 2.0000 Each(s)      |                    | ^                              |        |
| r        | Bolt<br>Batch:                  | M100743                                  |              | ,                   | P                  | ×                              |        |
| 34.0     | AN960JD616                      |  |              | Washer              | <del></del>        | - <i>{</i>                     |        |
|          |                                 |  |              |                     |                    |                                | \$ (4) |
| Com      |                                 | 18.0000 Each(s)/Unit                     | Total :      | 18.0000 Each(s)     |                    | 4                              |        |
|          | Washer<br>Batch:                | M105125                                  |              |                     | 13                 |                                |        |
| 35.0     | MS21042L6                       |  |              | Ņut                 |                    | 1(11)) (11)                    |        |
|          |                                 |  |              |                     |                    |                                |        |
| Comi     |                                 | 6.0000 Each(s)/Unit                      | Total:       | 6.0000 Each(s)      |                    | 118811138113001                |        |
|          | Nut<br>Batch:                   | M104374                                  |              |                     | 189                |                                |        |
| 36.0     | QC4                             |  | <u> </u>     | INSPECT 100% KI     | TS FOR COMPLETE    | NESS                           |        |
|          |                                 |  |              |                     |                    |                                |        |
|          |                                 | T 100% KITS FOR CO                       | OMPLETE      |                     | CA PI              | 10/25                          |        |
| 37.0     | PACKAGING                       | 1<br>                                    |              | PACKAGING RES       | OURCE #1           |                                |        |
|          |                                 |  |              |                     |                    |                                |        |
| Comr     |                                 | GING RESOURCE #1 and pack for shipping a |              | N442 EEA 202        |                    |                                | -      |
|          | •                               |  |              |                     |                    |                                |        |
|          | *****Ens                        | ure tube is not packaç                   | ged if curin | g time is less than | 12 hrs, see step 2 | 27 for application time & date | :      |
|          |                                 | 10                                       | · ~ \ .      | 1 1/1               |                    | 5/P-                           |        |
|          | Time & d                        | late of packaging: <u>(ぴ</u>             | ): OU AK     | 4 offelgg           |                    | (x)                            |        |
|          | Location:                       |  |              | ,                   | 21.100             | ~Q                             |        |
|          | PPP Rev                         | / BAG                                    |              |                     | 11004              | <b>3</b> 2                     |        |
|          |                                 | ,  |              |                     |                    |                                |        |

Dațe:

Monday, 7/16/2007 2:41:38 PM

User:

Kim Johnston

**Process Sheet** 

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH AFT X-TUBE 412

Job Number: 33538

Part Number: D412664203

Job Number:



Seq. #:

**Machine Or Operation:** 

Description:

38.0



FINAL INSPECTION/W/O RELEASE

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



N DY.10.29

| DART AEROSPACE LTD                             | Work Order:  | 33538        |
|--|--------------|--------------|
| Description: Crosstube Assembly (412 High Aft) | Part Number: | D412-664-243 |
| Inspection Dwg: D412-664-243 Rev: D            |              | Page 1 of 1  |

## FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

| In       | spection Sheet | Tolerance     | Actual    | Accept   | Reject | Method of  | Comments |
|----------|----------------|---------------|-----------|----------|--------|------------|----------|
| Dra      | wing Dimension | 1010141100    | Dimension | ,        |        | Inspection |          |
|          | 2.684          | +0.005/-0.000 | 2.689     | //       | -      |            |          |
|          | 2.748          | +0.005/-0.000 | 2,753"    |          |        |            |          |
| ٠.       | 2.884          | +0.005/-0.000 | 28881     | //       |        |            |          |
|          | 3.019          | +0.005/-0.000 | 3,022"    |          |        |            |          |
|          | 3.163          | +0.005/-0.000 | 3,165     | //       |        | ,          |          |
|          | 3.308          | +0.005/-0.000 | 33/3"     | //       |        |            |          |
| ⋖        | 3.429          | +0.005/-0.000 | 2,433"    |          |        |            |          |
| SIDE     | 2.990          | +0.005/-0.000 | 2 994     | V        |        |            |          |
| <u>S</u> | 2.618          | +0.005/-0.000 | 2.621     |          |        |            |          |
|          |                |               |           |          |        |            |          |
|          | 0.200          | +/-0.010      | , 200°'   | V.       |        |            |          |
|          | R0.063         | +/-0.010      | R0.063"   | 0        |        |            |          |
|          | R0.500         | +/-0.010      | BO.500    | //       |        |            |          |
|          | 4.971          | +/-0.030      | 4,969"    |          |        |            |          |
|          |                |               |           | /        |        |            |          |
|          | 2.684          | +0.005/-0.000 | 2.689     |          |        |            |          |
|          | 2.748          | +0.005/-0.000 | 2753      |          |        |            |          |
|          | 2.884          | +0.005/-0.000 | 2. 888    | //       |        |            |          |
| :        | 3.019          | +0.005/-0.000 | 3,023"    | 0/       |        |            |          |
|          | 3.163          | +0.005/-0.000 | 3,165"    | //       |        |            |          |
|          | 3.308          | +0.005/-0.000 | 3.311"    | //       |        |            |          |
| · 🗠      | 3.429          | +0.005/-0.000 | 3,432"    | 1        |        |            |          |
| SIDE     | 2.990          | +0.005/-0.000 | 2 994     | //       |        |            |          |
| S        | 2.618          | +0.005/-0.000 | 2'622"    |          | ·      |            |          |
|          |                |               | •         |          |        |            |          |
|          | 0.200          | +/-0.010      | ,200'     |          | _      |            |          |
|          | R0.063         | +/-0.010      | A0,063"   | _//      |        |            |          |
|          | R0.500         | +/-0.010      | A0.500"   | /        |        |            |          |
|          | 4.971          | +/-0.030      | 4.965     | 0,       |        |            |          |
|          | 124.09         | +/-0.020      | 124,110   | <b>V</b> |        |            |          |

Measured by: J.F.

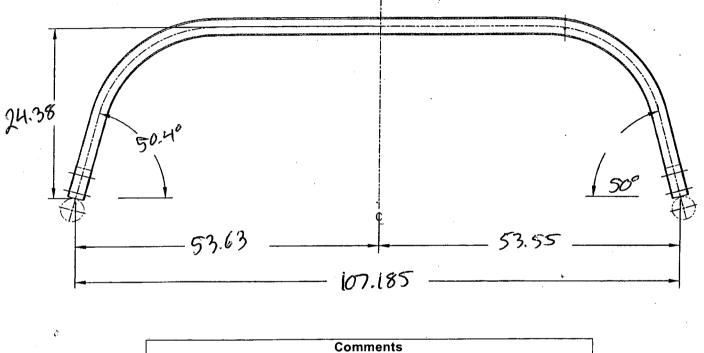
Date: 07/10/// Date: 07/10/4 Prototype Approval: N/A

Date: N/A

| Rev | Date     | Change                                | Revised by | Approved |
|-----|----------|---------------------------------------|------------|----------|
| Α   | 04.06.16 | New Issue (P/O D412-664-203)          | KJ/JLM     |          |
| В   | 06.03.09 | Dwg Rev updated                       | KJ/JLM     |          |
| С   | 07.05.08 | Tolerance updated for dimension 4.971 | KJ/JLM     |          |

| DART AEROSPACE LTD                    | Work Order:  | 33538        |
|---------------------------------------|--------------|--------------|
| Description: Crosstube High Aft (412) | Part Number: | D412-664-203 |
| Inspection Dwg: D412-664-243 Rev: D   |              | Page 1 of 1  |

| Required Dimension | Min    | Max    |
|--------------------|--------|--------|
| Height             | 24.24  | 24.50  |
| 1/2 Span           | 53.59  | 53.85  |
| Angle              | 49     | 52     |
| Total Span         | 107.18 | 107.70 |



|                 | Comments                               |   |  |
|-----------------|--|---|--|
|                 | 1                                      |   |  |
| ·               | ************************************** |   |  |
|                 |  |   |  |
|                 | Cal                                    |   |  |
|                 | 4                                      |   |  |
| QC15 Inspection |  |   |  |
| Date            | 07.14.19                               | , |  |

| Rev | Date     | Change                            | Revised by | Approved |
|-----|----------|-----------------------------------|------------|----------|
| Α   | 07.02.06 | New Issue                         | KJ/JM      | 1        |
| В   | 07.05.08 | Dimensions updated per Dwg rev. D | KJ/JLM     | m        |
|     |          |                                   | , ()       |          |



| DESIG        | PH      | DRAWN BY   | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA  |
|--------------|---------|------------|---|
| CHEC         | (ED GP) | APPROVED # | DRAWING NO. REV. D D412-664-243 SHEET 1 OF 3  |
| DATE<br>07.0 | 03.09   |            | TITLE SCALE CROSSTUBE ASSEMBLY (412 HI AFT) NTS                                       |
| Α            |         | 01.10.17   | NEW ISSUE   |
| В            |         | 05.02.04   | ADD HOLES FOR COMPATABILITY WITH BHT/AA SKIDTUBES                                     |
| С            |         | 06.10.27   | REMOVE D2856-600-1087, ADD<br>D2732-058 & MAGNOBOND 6398<br>MS21920-32 WAS MS21920-30 |
| Ò            |         | 07.03.09   | REMOVE D2732-058, CHANGE TO D3595-063-570   |

| Part Number    | Description   |
|----------------|---|
| D412-664-243   | CROSSTUBE ASSEMBLY (412 HIGH AFT)   |
| D6009-129      | CROSSTUBE   |
| D3595-063-570  | RUBBER CUSHION  |
| D2896-1        | SUPPORT   |
| D2856-600-1009 | ABRASION STRIP  |
|                |   |
| MS21920-28     | CLAMP   |
| MS21920-30     | CLAMP (OR MS21920-32)   |
| D3189-1        | CHAFING SHIELD  |
|                |   |
| MAGNOBOND 6398 | ROCKWELL SPECIFICATION RBO-120-023<br>ADHESIVE (TEXTRON/BELL SPEC. 299-947-100,<br>TYPE II, CLASS 2 ADHESIVE) |
|                | D412-664-243  D6009-129 D3595-063-570 D2896-1 D2856-600-1009  MS21920-28 MS21920-30 D3189-1                   |

## **GENERAL NOTES:**

- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- MATERIAL: MANUFACTURED FROM D6009-129 FINISHED LENGTH = 124.09±0.020
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2 PAINT OUTSIDE PER DART 005 4.2
- PART IS SYMMETRIC ABOUT CENTERLINE.
- RUN-OFF PART. BLEND OUT EDGE LONGITUDINALY, TRANSITION SHOULD BE SMOOTH.
- BEND PROGRESSIVELY WITH A MINIMUM OF 8 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS.
- INSTALL D2856-600-1009 ABRASION STRIP WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF CROSSTUBE PER QSI 035.
- 10) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 11) APPLY A 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF D2896-1 THAT WILL BE IN CONTACT WITH THE CROSSTUBE PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 12) INSTALL MS21920-30 CLAMPS (OR -32) WITH D3595-063-570 RUBBER CUSHIONS TO SECURE D2896-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE CROSSTUBE SUPPORT.
- 13) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

RETURN TO ENGINEERING UNCONTROLLED COPY SUBJECT TO AMENDMENT WITHOUT NOTICE

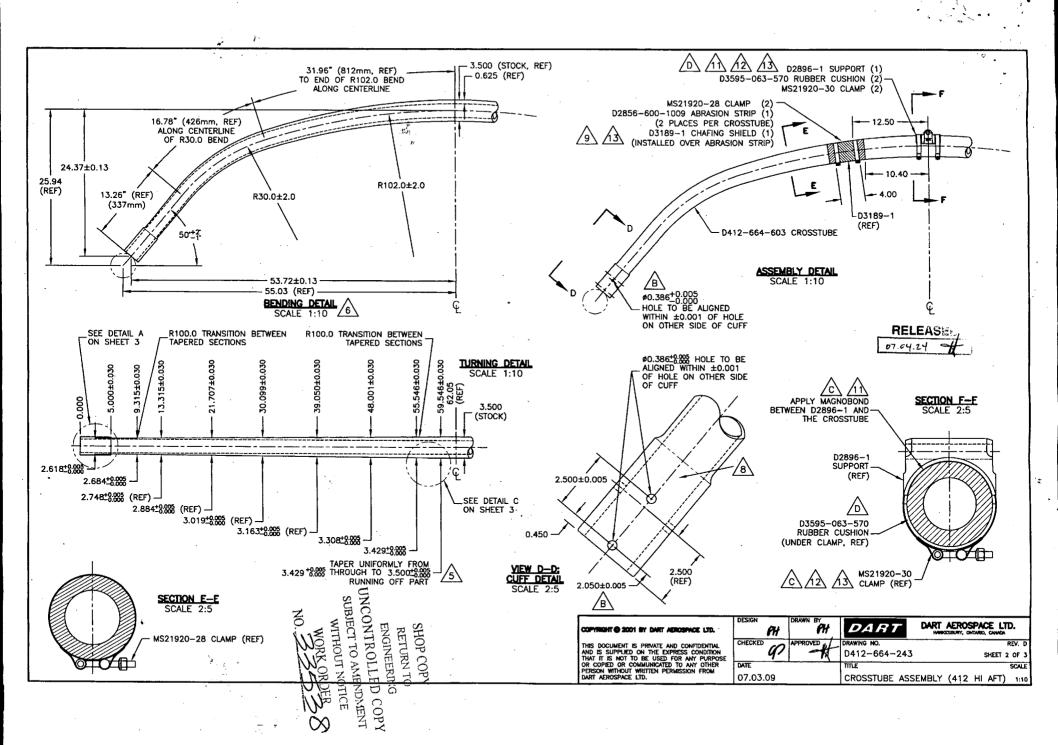
SHOP COPY

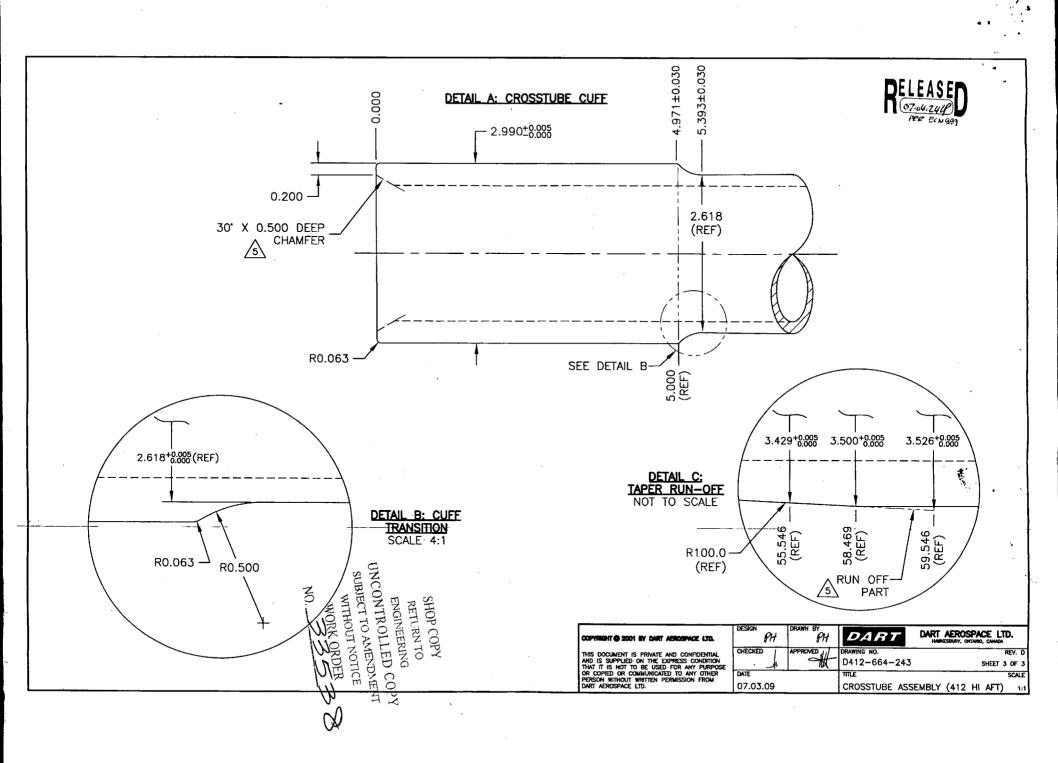
WORK ORDER 8 NO ...

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|-----------------------------------|--|----------|---|--|
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|                                   |  | <i>ć</i> |   |  |
|                                   |  |          |   |  |
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| many part of many thinks the same |  | Ý.       | 1 |  |







## LIQUID PENETRANT TEST REPORT

P- 08662

| _  | > \ \ \   |                        |   |  | PAGE   | OF                              |
|--|---|------------------------|---|--|--|---------------------------------|
| CLIENT   | Dart Aerospace  |                        | DATE                                    | Detober 18, 20                           | TIME   | AM D PM 42                      |
| ATTENTION  | 3'11 Beckett  |                        | _ ACUREN JOB NO.                        | 188-07-012                               | <u> </u>   | ·                               |
| ADDRESS 1  | 270 Abendeen Stre   | eet                    | _ PO/WO No.                             |  |  |                                 |
| <u>H</u>   | AWKESBURY, OHTORIO  | KGA IKT                | WORK LOCATION                           | as shown                                 |  |                                 |
| <u>.</u>   |   |                        |   | E1417-99                                 | REV./DATE  | 99                              |
|  | ross Tube inspectio   |                        |   |  | · ·  |                                 |
| ITEM(S) EXAMINED   | respection of High  | ASJ X.TW               | be 412,20                               | 6L AFT X-TU                              | be and   | 2061                            |
|  | WO X-Tube as he   |                        | 1                                       |  |  |                                 |
| JOB DESCRIPTION  | PROCEDURE NO. BE  | REV./DATE              | £9 T                                    | FECHNIQUE NO. LT-XXXX-X                  | XX REV./DATE   |                                 |
| PART NO. 17 412664   | 203 , D206467203; D 20666   |                        |   | 075 Aluminum                             | THICKNESS ←  | = 1/2 17                        |
|  |   |                        | d A Level 2                             | Penetra + ex                             | Lacina   |                                 |
| Der  | samination using Type<br>Standard ASTI  | n E141                 | 7-99                                    | <u> </u>                                 | 400011000  |                                 |
| TEST DETAILS   |   |                        | • |  |  |                                 |
| METHOD   | <b>D</b> FLUORESCENT □ \  | /ISIBLE                | WATER WASH                              | . ∠ □ SOLVENT RE                         | MOVARI E   | ☐ Post Emulsifier               |
| FAMILY BRAND Mag   | naflux Batch # 07   |                        | BLACK LIGHT S/N/                        |  |  | AMBIENT < 2 fc                  |
| PENETRANT PENETRANT REMOVER  | MINIMUM DWELL TIME  | 10 Min.                |   | FLASHLIGHT 🛘 TROUBLELI                   | SHT 🗆 OUTPU  | T>100 fc@ SURFAC                |
| DEVELOPER NA   | MINIMUM DRY TIME MINIMUM DWELL TIME   | >10 Min.               | OTHER LIGHT METER S/N                   |  |  |                                 |
| DEVELOPER TYPE ALA   | NON AQUEOUS AQUEOUS   | 10 Min.  □ DRY         |   | Vibration Due Ho                         | CAL DUE [  | JATE                            |
| TEST SURFACE   |   |                        | I SMEXINGET (                           | DIBPOTION DW PO                          | CL4, 2508  |                                 |
| SURFACE CONDITION  | ☐ As GROUND ☐ As WEL  |                        | ☐ MACHINED                              | ☐ ŞHOT BLASTED                           | Ū <b>P</b> CLE   | EAN BARE METAL                  |
| SURFACE TEMPERATURE RESULTS-   |   | 0°F то 10°С/50°        | F                                       | <b>№</b> 10°C/50°F TO 52°C/12            | 5°F □ > 5  | 2°C/125°F                       |
| ITEM   | ( METRIC IMPERIAL)  |                        | <del></del>                             |  | <del></del>  |                                 |
|  | COMMENTS  | ACCEPT REJECT          |   |  |  |                                 |
| 4 pleces P.N.D   |   |                        |   | $\times$                                 | $\times\!$ |                                 |
| Jb#15, 3   | 4/38,34/37,33/56,34/40  | ļ                      |   |  | $\times$   |                                 |
|  | ,   |                        |   |  |  |                                 |
| I prese P.N. D41   | 12664203 Jb # 33538   |                        | ベンベン                                    |  |  |                                 |
|  |   |                        |   |  |  |                                 |
| I pue PN. DZ   | 06667203 Tb # 34144   |                        |   |  | $\sim$   |                                 |
|  | <u></u>   |                        |   |  |  |                                 |
| A  |   |                        | XX                                      | <xx< td=""><td></td><td></td></xx<>      |  |                                 |
| All la piec  | es Acceptable   |                        |   |  |  |                                 |
|  |   |                        |   | $\times \times \times$                   | $\times\!$ | $\times$                        |
|  |   |                        |   | $\times$                                 | $\times$   |                                 |
|  |   |                        |   |  |  |                                 |
| Scope of Services  |   | 1                      |   |  |  |                                 |
|  | to perform services extends only to those services provide expressions of opinion reflect the opinions or observations    |                        |   |  |  |                                 |
|  | en Group Inc. is not assuming any responsibilities of the ov<br>y Acuren Group Inc. In no event shall Acuren Group Inc.': |                        |   |  |  | use decisions as a result of th |
| in performing the services provided,   | Acuren Group Inc. uses the degree, care and skill ordinari  |                        |   |  |  |                                 |
| The state of the s | en Group Inc.   | y ener ener under same | ar circumstances by others per          | rjorming such services in the same or si | muar tocatity. No oth  | er warranty, expressed or       |
| SIGNATURES   |   |                        |   |  |  |                                 |
| CLIENT REPRESENTATIVE  | Jason liveleck  |                        | Mult                                    | DTR#                                     | 178-07-  | 01248.                          |
| ECHNICIAN (SIGNATURE):   | M/h.h W. Luck   | _ /                    | SIGNATURE                               | REPORT                                   | ,  |                                 |
| JAME (Dourt)   | 10 1 11-1   |                        |   | REVIEWED BY:                             | · · · · · · · · · · · · · · · · · · ·  |                                 |
| NAME (PRINT):  | 15T TECHNICIAN  |                        | 2 <sup>ho</sup> TECHNICIAN              |  | NAME   | INITIALS                        |
|  | CGSB LEVEL 2 SNT LEVEL 2  | CGSB LEVE              | i i                                     | EL                                       |  |                                 |
|  | CGSB REG. No 25323  | CGSB Reg.              | No                                      |  |  |                                 |
|  | . —   |                        |   |  |  |                                 |



## LIQUID PENETRANT TEST REPORT

P- 08665

| CUREN  |                         |                    |                  |                               |               |                                 | Page   | OF                                       |
|--|-------------------------|--------------------|------------------|-------------------------------|---------------|---------------------------------|--|--|
| LIENT  | Dart Aer                | Ospace             |                  | DATE                          | Odober        | 19 2007                         | TIME   | AM BD PM □                               |
| TTENTION   |                         | eckett             |                  | ACUREN JOB NO.                | 187-0         | 7-0115                          | <u> </u>   |  |
|  |                         | rdeen Street       | -                | PO/WO No.                     |               |                                 |  | ·  |
| DDRESS   | Hawkesh                 | wry Ontario        | KCA IK           | -<br>7 Work Location          | as sh         | own.                            |  |  |
|  | Hankesis                | WIY DETWIN         | 7011.11          | ACCEPTANCE STI                | E141          | 7-99                            | REV./DA  | TE 99.                                   |
|  | 0 =                     | , <u>k</u> 1       |                  | YOOKLIVIOÉ OU                 | · <del></del> |                                 | <del></del>  |  |
| ROJECT Cross Tube Inspection   |                         |                    |                  |                               |               |                                 |  |  |
| EM(S) EXAMINED Inspection of X-tube assemblies, 212/205 high Fed, 212/205 High AFT.  |                         |                    |                  |                               |               |                                 |  |  |
| 2061 FWD, 412 High AFT, 212/205 high Feel as histed Below  |                         |                    |                  |                               |               |                                 |  |  |
| OB DESCRIPTION PROCEDURE NO. LT-0002 REV./DATE/E1417-99 TECHNIQUE NO. LT-0002+22 REV./DATE   |                         |                    |                  |                               |               |                                 |  |  |
| ART NO. X-Tube assemblies as 1150gd. MATERIAL 7075 Aluminum THICKNESS < 1/2"   |                         |                    |                  |                               |               |                                 |  |  |
| COPE 100% examination of all outer surfaces per standard ASTM E1417-99   |                         |                    |                  |                               |               |                                 |  |  |
| Typel, Method A, Level 2.  |                         |                    |                  |                               |               |                                 |  |  |
|  |                         |                    |                  |                               |               |                                 |  |  |
| EST DETAILS  | FLUOR                   | PESCENT D\         | /ISIBLE          | WATER WASH                    |               | ☐ SOLVENT REM                   |  | Post Emulsified                          |
| AMILY BRAND M  |                         | Batch # 07 F       |                  | BLACK LIGHT S/N               | 8168          | <b>□</b> - <b>Ø</b> UTPUT > 100 | 0 μ <b>W</b> /cm²  | AMBIENT < 2 fc                           |
| ENETRANT ZY  |                         | MINIMUM DWELL TIME | 10 <b>M</b> IN.  | LIGHTING EQUIP.               | ☐ FLASHLIGH   | HT 🔲 TROUBLELIGH                | IT 🔲 OUT   | PUT>100 fc @ SURFACE                     |
| 'ENETRANT REMOV  | ER Water                | MINIMUM DRY TIME   | >10 <b>M</b> IN. | OTHER                         | 1697          | 911.                            | CAL DU   | E DATE \$/9/13                           |
| EVELOPER NA  |                         | MINIMUM DWELL TIME | 10 Min.<br>□ DRY | LIGHT METER S/N               | 10700         | هاي                             | OAL DO   | CONIC 61 // 1.3                          |
| DEVELOPER TYPE   | LI NON AQUE             | EOUS AQUEOUS       | U DRI            |                               |               |                                 |  |  |
| EST SURFACE  | N 🔲 As Groun            | ND AS WEL          | DED ·            | ☐ MACHINED                    | ☐ SHOT I      | BLASTED                         |  | CLEAN BARE METAL                         |
|  | TURE - <-4°C/2          |                    | 20°F to 10°C/50  | °F                            | D 10°C/       | 50°F то 52°C/125                | °F 🔲 :   | > 52°C/125°F                             |
| RESULTS-   | ( METRIC                | MPERIAL)           |                  |                               | ·             |                                 |  |  |
| ITEM   | COMM                    | IENTS              | ACCEPT REJECT    | J~~~                          |               |                                 |  |  |
| P.N. D212  | 664100                  | x loiece           |                  |                               |               |                                 | $\sim$   |  |
|  | # 34929                 |                    |                  | 7***                          |               | $\times$                        | $\times$   | <><>>                                    |
|  | 64201 x                 | 1 21666            |                  |                               |               |                                 | ~~~~   |  |
|  | 30420                   | 15.00              |                  | $1$ × $^{\circ}$ × $^{\circ}$ | >             |                                 |  |  |
|  | 667103 x                | 0-11005            |                  |                               |               |                                 | ,X.,   |  |
|  |                         |                    |                  |                               |               |                                 | $> \leftarrow >$   |  |
| 100 #  | 5 34926 0               |                    |                  | +                             | $\gg \gtrsim$ |                                 |  |  |
|  | <u>664203 x</u>         | 1piece             |                  |                               | $\times \sim$ |                                 |  | <u>,X.,X.,X.</u>                         |
| Job #.   | 33537                   | 9                  |                  | -{\XX                         | $\searrow$    |                                 |  |  |
| N. D2121   | 664101 X                |                    |                  | T > T > T                     |               | $\times \times$                 | $\times\!$ | $\langle \times \rangle \langle \rangle$ |
| Job #'s 34931 and 34930  |                         |                    |                  |                               |               |                                 | >  |  |
|  |                         |                    | <del></del>      |                               |               |                                 |  |  |
| AllSe  | ven(7)                  | Units Accep        | suple.           |                               |               |                                 |  |  |
| cope of Services  The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as epresentations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.  It is expressly understood as a result of the owner/operator retains complete responsibility for the engineering; manufacture, repair and use decisions as a result of the owner/operator retains complete responsibility for the engineering; manufacture, repair and use decisions as a result of the owner/operator retains complete responsibility for the engineering; manufacture, repair and use decisions as a result of the owner/operator retains complete responsibility for the engineering; manufacture, repair and use decisions as a result of the owner/operator retains complete responsibility for the engineering; manufacture, repair and use decisions as a result of the owner/operator retains complete responsibility for the engineering; manufacture, repair and use decisions as a result of the owner/operator retains complete responsibility for the engineering; manufacture, repair and use decisions as a result of the owner/operator retains complete responsibility for the engineering; manufacture, repair and use decisions as a result of the owner/operator retains complete responsibility for the engineering; manufacture, repair and use decision |                         |                    |                  |                               |               |                                 |  |  |
| in performing the services in plied, is made or intende  | ed by Acuren Group Inc. |                    |                  |                               |               | 6                               |  |  |
| SIGNATURES   |                         | · // /             |                  |                               |               | <u> </u>                        | 100  |  |
| CLIENT REPRESENTATIVE MATTHEWAY WILLIAM AND SIGNATURE DTR # 198-07-01157   |                         |                    |                  |                               |               |                                 |  |  |
| FECHNICIAN (SIGNA  | TURE):                  | And Mastra         |                  |                               |               | REPORT<br>REVIEWED BY:          |  |  |
| VAME (PRINT):  | _100                    | ark Westover       |                  | 2 <sup>ND</sup> TECHNICIAN    |               | -                               | NAME   | INITIALS                                 |
| CGSB LEVEL SNT L |                         |                    |                  |                               |               |                                 |  |  |